PROJECT TITLE	:	COMPUTER AND INSTRUMENTATION SUPPORT GROUP
PERIOD COVERED	:	23 JANUARY - 22 FEBRUARY 1982
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Automation of the Smoking Laboratory (Project COLDAC)

The final structure of the data base has now been established. It is based on the information collected from the specification lists of the various users and on numerous simulations made on a demonstration data base. The final version, which we shall install onto the HP 1000 during the first two weeks of March, comprises 256 analytical criteria and will have a capacity of 11000 inputs. Access and querying are carried out via about 10 keys of which the most important are :

- the sample code - cigarette code;
- analysis month - production centre;
- production date - country of sale.

Keys which are more specific have been planned for development tests and certain TLA. A 45-Mbyte free space has been reserved on the disc for storing all the analytical data of the Smoking Laboratory. A 8-Mbyte free zone has been kept for future extensions of the data base.

A detailed analysis of the specification lists shows that it will be necessary to write about 200 programmes in FORTRAN, each having 25 to 60-Kbyte codes. This considerable amount of work results firstly from the requirements of the users (which, it should be mentioned, are totally justifiable) concerning the editing of the stored data and secondly, from the problems posed by data acquisition in real time on laboratory instruments.

We are currently working on the development of the main querying programmes of the data base. A demonstration version has already enabled us to produce a complete routine report with all the calculations from a bar code which is read optically on a label.

The calculations in this report include statistical tests (DIXON) enabling us to delete out of range values. A programme allowing dynamic management of the questions - answers (menu) on the screen of the terminals is being studied by our group.

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Data handling in protected fields by a screen formula offers the possibility of simple dialoging between the operator and the programme to be performed. This approach also affords greater security of operation and enables the validity and nature of the operator's answers to be checked locally.

Miscellaneous

The firmness-testing instruments for QC Richmond were sent at the end of January. Other units are in preparation for various PME affiliates and Canada.

Training Courses

A 2-day course was given by Hewlett-Packard, Grenoble, on HP 3078 interfaces (Data coupler) and this enabled us to become familiar with certain complex problems concerning the instrument - computer link-up. Regarding this matter we have developed a demonstration programme for automatic reading of Mettler AK 160 scales controlled by the HP 1000.

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